

# INSIDE

 **douglas college**

(604) 520-5400 700 Royal Avenue, New Westminster, B.C.

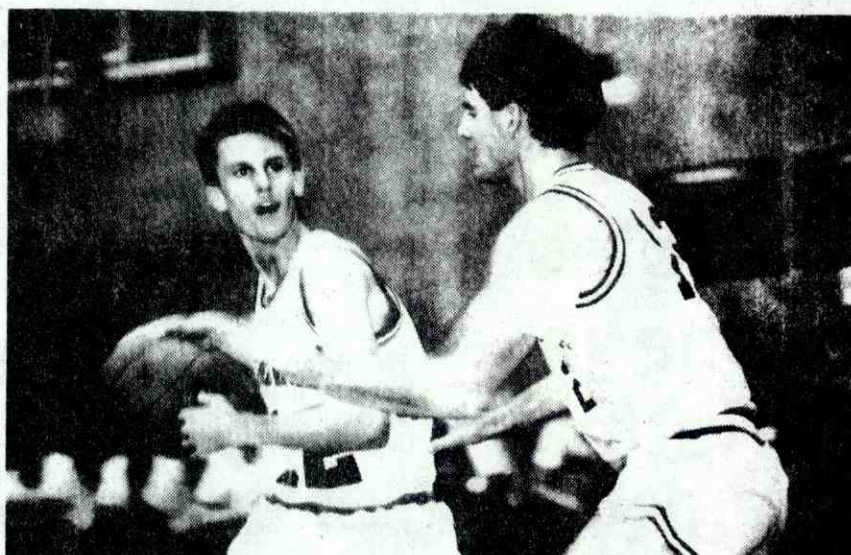
Mailing Address: P.O. Box 2503, New Westminster, B.C. V3L 5B2

## Inside INSIDE

December 13, 1988 Issue

Christmas Party	2
Group Advising Sessions	2
New Campus for Kwantlen	3
Athletic Update	4
Bonsai Moles	5
Event Offer	6
Coming Events	6
UBC Diploma - Adult Ed.	7
Briefs	8
TAC Bulletin	9
Innovation Abstracts	12

*Inside Douglas College is published weekly September through May and bi-weekly June through August by the Douglas College Public Information Office. Submissions are due Tuesday noon for publication the following Tuesday. Submissions are accepted typewritten or on floppy disk in Word Perfect or ASCII format. Material may be edited for brevity and clarity. Tips, scoops and suggestions are always welcome. Please contact the Public Information Office, Room 4840, local 4805.*



Douglas College guard Rory Brown (left) goes up against Chemekata's Jeff Blair in the 5th Annual Royal Classic Basketball Championship game. Chemekata downed the Royals 95-63. In the final standings, with four American and four Canadian teams competing, Douglas College came up 2nd. See the Athletic Update on page 4 for further details.

## News of Great Joy

Nothing captures the joyous spirit of the holidays better than choral music. On December 11th and 14th the Amabilis Singers of Douglas College lift their 110 voices in a celebration entitled "News of Great Joy."

The concert begins with a candlelight procession, followed by a selection of familiar and not-so-familiar carols. The audience is invited to sing along

on the traditional carols and enjoy works such as Holst's "Christmas Day" and Mozart's "Laudate Dominum."

The two performances of the fourth annual Family Christmas Concert also feature the Douglas College Youth and Children's Choir. The Douglas College performance is on Wednesday, December 14 at 8:00 p.m. in the

**continued on page 2**



## Choral Concert Continued

Douglas College Performance Theatre.

Tickets at the door are \$5 general admission, \$3 for students and seniors. Reserve tickets by phoning the Box Office at 520-5488.

## Group Advising Sessions Schedule

All sessions start promptly at times advertised and are approximately 1 1/2 - 2 hours in length. Sessions are free, pre-registration is not required. All sessions are held at the New Westminster campus unless stated otherwise.

### DECEMBER 19 - 23

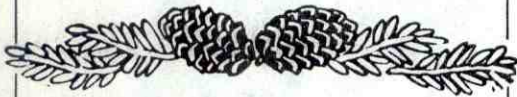
**Business Management Non-Transferable Career Programs** Certificat and Diploma (Acc, Adm Mgmt, CIS, Con Mgmt, Gen, Mrk) . . . . . **Monday, Dec. 19**  
1000 hours  
Room 1715  
Sharon

**Education - University Transfer** . . . . . **Tuesday, Dec. 20**  
SFU  
(Elem. & Sec.) B.Ed.  
0830 hours  
Room 1803  
Lorraine

**Commerce & Business Administration** . . . . . **Tuesday, Dec. 20**  
University Transfer programs to UBC & SFU  
1400 hours  
Room 1715  
Sharon

**First-Year Arts - University Transfer** . . . . . **Wednesday, Dec. 21**  
Including Major requirements and pre-entry requirements for Bachelor of Social Work  
1000 hours  
Room 2803  
Linda

**Criminology Career and University Transfer Programs** . . . . . **Wednesday, Dec. 21**  
Certificate and Diploma  
1400 hours  
Room 1231  
Lorraine



# Douglas College Christmas Party



for faculty, staff,  
administration

Thursday, December 15

**Lower Cafeteria, 3:00 - 6:00**

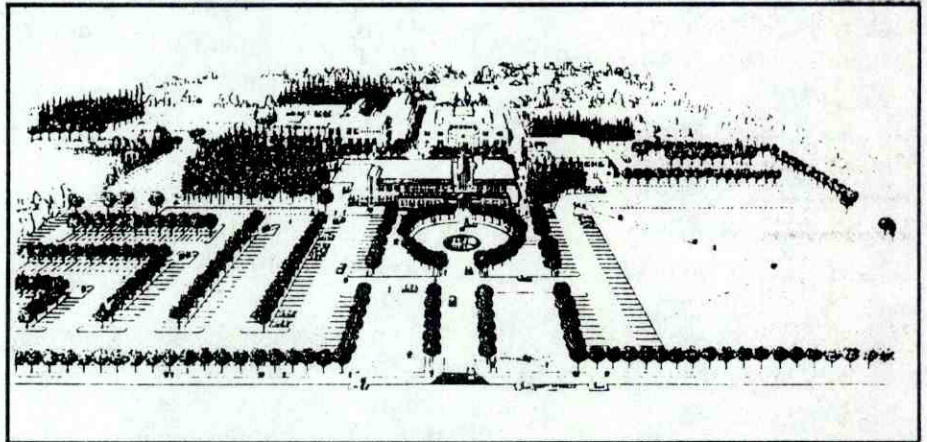
Hot & Cold Hors-d'oeuvres  
No-Host Bar  
(1st beverage complimentary)

# New Campus for Kwantlen, Finally

The first phase of Kwantlen College's permanent Surrey campus will begin construction soon, after the provincial government announced funding this fall for the new \$20 million campus. Phase I is slated to be opened in early 1990, with 175,000 sq. ft. to serve the equivalent of 2,000 full-time students, reports the *Now* Newspapers.

Tenders have been called to prepare the 22-acre site in the 12700-block 72nd avenue in Newton. It will replace the college's existing Surrey campus, a collection of leased portable buildings on 140th Street.

The new campus will serve the student population from Sur-



rey, Delta, Richmond and Langley. At the present time many of the region's students are attending classes at better equipped colleges such as Douglas College and Vancouver Community College.

In a Douglas College statistician's report for the fall of 1986, 1242 students from the

Kwantlen College region attended Douglas College - just over 26% of the total Douglas College enrollment. More recent figures were not available.

Phase II will be an additional 280,000 sq. ft to handle another 1,700 students from the Kwantlen region.





# Athletic Update

## MEN'S BASKETBALL: Results of the 5th Annual Royal Classic Tournament

### Friday, December 2

Game 1 - Pacific Lutheran University JV's (100) vs. UBC JV's (88)

Exhibition Game - Maple Ridge Senior Secondary (84) vs. Cariboo Hill (59)

Game 2 - Chemekata C.C. (110) vs. Fraser Valley College (64)

Game 3 - Portland C.C. (68) vs. Malaspina C.C. (63)

Game 4 - Douglas College (87) vs. Big Bend C.C. (75)

### Saturday, December 3

Game 5 - Fraser Valley College (92) vs. UBC JV's (74)

Game 6 - Big Bend C.C. (88) vs. Malaspina C.C. (64)

Game 7 - Chemekata C.C. (93) vs. Pacific Lutheran JV's (75)

Game 8 - Douglas College (109) vs. Portland C.C. (79)

Game 9 - UBC JV's (72) vs. Malaspina C.C. (69)

Game 10 - Fraser Valley (90) vs. Big Bend (87)

Game 11 - Pacific Lutheran JV's (86) vs. Portland C.C. (85)

Game 12 - Chemekata C.C. (95) vs. Douglas College (63)

### Standings:

- 1st place - Chemekata C.C.
- 2nd place - Douglas College
- 3rd place - Pacific Lutheran U.
- 4th place - Fraser Valley College
- 5th place - Portland C.C.
- 6th place - Big Bend C.C.
- 7th place - UBC JV's
- 8th place - Malaspina C.C.

### All-Stars:

Rob Schmidt - Fraser Valley  
Pierre Williams - Portland C.C.  
Sean Beasley - Douglas College  
Glen Cote - Douglas College  
Ben Naro - Chemekata C.C.

### M.V.P.:

Tyrone Greer - Chemekata C.C.  
Tyrone Greer has been signed by Oklahoma, an NCAA Division I school.

**HOCKEY:** The Royals defeated Trinity Western 12 - 8 at Port Moody last Saturday night, to finish off the first semester. Goals were from Frank Pakozdy (3), Glen Bulawka (3), Alan Wall (1 goal, 4 assists), Shawn Hokanson (4 goals, 4 assists), and Darren Battersby (1).

### Standings to date:

Team	Games	Win	Loss	Tie	Points
BCIT	6	4	1	1	9
Cariboo	6	3	1	2	8
Douglas	6	3	2	1	7
Trinity	6	0	6	0	0

**WRESTLING:** The Douglas College Wrestling Club took part in the SFU open, placing 3rd out of 19 teams. Burnaby Mountain was 1st, University of Calgary 2nd.

### From Douglas:

115 lbs., Tom Petryshen - 4th  
129 lbs., Walter McLean - 2nd  
145 lbs., Cory Kwak - 3rd  
220 lbs., Yogi Johl - 2nd  
220 lbs., Robbie Johl - 4th

## SPORTS MENU

### Men's Basketball:

- ◆ December 21 - Royals vs. Grande Prairie (Home, 7:00 pm.)
- ◆ December 22 - Royals vs. Mount Royal (Home, 7:30 pm.)
- ◆ December 28 - January 1 - at SAIT Tournament (Alberta)

### Women's Basketball:

- ◆ December 28 - January 3 - at Phoenix Tournament (Arizona)

### Volleyball/Badminton/Hockey:

- ◆ Resume action January 4



# To: Editor, Insider

## From: Len Millis

### Re: Update on Bonsai Moles

In the last month since the arrival of the first Bonsai Mole shipment from Japan, I have been terribly busy and have had no time to report the many interesting developments which have occurred. Regrettably, I have also had no opportunity to correct the numerous misunderstandings which inevitably seem to accompany scientific advances, some of which have appeared on the pages of Inside Douglas College.

First I would like to correct the notion that moles are rodents, a common misapprehension no doubt. In fact moles are of the order Insectivoria, and in our case, family American-Asiatic Moles. The Bonsai Mole itself is a man-made creation. Dr. Furomoto started with one of the smallest of moles, the Japanese Shrew Mole (*Urotrichus talpoides*) to get the genetic raw material to create the Bonsai Mole. Using a complex and still secret computer driven genetic modelling system invented at Osaka University, Dr. Furomoto was able to engineer an entirely new animal.

What is astonishing about this work was that the design team set out at the beginning to create an animal which would have, among many others, the following characteristics: 1. be able to burrow in the hard and root-

dense soil of Bonsai plants, 2. be strictly carnivorous, 3. be programmed to fall easily into specially designed traps.

The last requirement was an important one since the high metabolic rate of all moles results in a substantial production of mole droppings. The toxic effect of excessive mole manure was discovered early on in the breeding experiments when a mole poisoned a famous 400 year old five-needle bonsai pine. The loss of this national treasure held back the whole bonsai mole breeding program for more than a year. Therefore, it is necessary to get the moles out after a specific time. Easy trapability was of utmost importance.

I know the many Mole fans at Douglas want to know how our breeding pair are doing. The answer is - very well. We believe we are about to have a blessed event in the shade of our own Bonsai tree, yes, baby Bonsai Moles. The gestation period is 5 weeks, so we expect results soon.

I would also like to take the opportunity to set the Philosophy Disciplines collective mind to rest. This project has no direct connection to any corporate sponsorship. The Japanese experiments were entirely financed by the University of Osaka. The only corporate in-

volvement was a peripheral one and it concerns the development of a peaceful device which was needed to control rogue moles which lost their genetic programming after having reproduced a number of generations. The college community should not be concerned as we probably will not have to use this device at Douglas. Even if we do have to use it, I want to emphasize that, contrary to rumour, the device is not harmful to human or animal life. The device is securely stored in a lead capsule.

P.S. Since we have not yet been able to obtain the non-lethal mole trap used in Japan we have constructed our own using the wire frames from Champagne corks; the size and malleability of the metal make them ideal for the traps. We need a few more traps, so if you are celebrating with Champagne please send me the wire from your Champagne bottles.



# Christmas Angels ...from Event

A special Christmas offer to all Douglas College staff, faculty, administration and students.

Award-winning poet Lorna Crozier will be at Douglas College next February as writer-in-residence. Buy a subscription to Event, between December 1 and December 21, and we'll give you her latest book, *Angels of Flesh, Angels of Silence*.

Ms. Crozier's work has been nominated for the Governor-General's Award, she has won the CBC Literary Competition, and she is frequently heard on CBC Morningside. Three of her poems appear in the December issue of Event.

In an upcoming review, White Rock poet and novelist, Leona Gom, writes, "Her work is always full of surprises, a style simultaneously clean and pared-down and also generous with insight."

Remember: You save \$9.95 on the book, and you receive six issues of Event over two years. For only \$17.00.

(If you already have a subscription, send a gift subscription to a friend - and either keep the book or send it along as part of the gift.)

See Vye Flindall, Room 3311 in the Department of English & Communications, Tuesdays and Wednesdays from December 1 to December 21, 8:30 to 4:30.

## Coming Events



(Unless otherwise indicated, all events take place in the Performing Arts Theatre, Room 4100 (4th floor, North Building). For tickets and information call the Douglas College Box Office 520-5488.)

- ◆ **Annual Family Christmas Concert with the Amabilis Singers & Douglas College Youth & Children's Choir.**  
Diane Loomer, director.  
**Wednesday, Dec. 14 - 8:00**  
Douglas College  
Performance Theatre.  
General Admission \$5;  
Students/Seniors \$3.
- ◆ **Thursday, December 15 - 3:00 - 6:00.** Douglas College Christmas Party for faculty, staff, administration. Lower Cafeteria. Hot & Cold Hors-d'oeuvres, no-host bar and complimentary 1st beverage.
- ◆ **Saturday, December 17 - 2:30 - 3:00 pm.** Diane Loomer, Pianist plays the grand piano at Irving House Historic Centre, 302 Royal Avenue. 3:00 - 3:30 pm. Douglas College Youth and Children's Choir perform. Admission by donation.



# UBC Diploma in Adult Education

The Faculty of Education offers a Diploma in Education (Adult Education). This program is designed for practitioners in the broad field of adult education who wish to improve the skills and knowledge required to organize, conduct, evaluate and administer programs in adult education, but who, for a variety of reasons, do not wish to pursue a graduate degree.

## The Course of Study

The program, revised in May 1980, requires at least 15 units of course work, of which 12 units are in adult education and 3 units are electives chosen in consultation with a faculty advisor.

The program must be completed within five years from admission, either by full-time or part-time study.

Several of the required courses are available by Guided Independent Study (correspondence). Student may earn a maximum of 6.0 units through Guided Independent Study.

## Course Work

- Introduction to Educational Psychology
- Instructional Techniques for Teaching Adults
- Institutions of Adult Education
- Developing Short Courses, Workshops and Seminars
- The Community Practice of Adult Education
- Diploma Seminar and Internship
- Instructional Design
- Electives (3 units)

## Admission

Applications are invited from persons:

1. who either have a Bachelor's degree from a recognized university, or equivalent academic and professional background and
2. who have had at least two years of working experience in the field of adult education (loosely defined).

Applications must include:

- Application for admission or re-admission to UBC
- Transcripts
- Application for admission to the Diploma Program
- Career statement
- Two letters of reference

## Application Deadlines:

Applications are adjudicated six times per year to accommodate those student who wish to begin the program with Guided Independent Study courses.

Adjudication Date	to begin Program
July 15	September
September 15	November
November 15	January
January 15	March
March 15	May
May 15	July

For further information, direct correspondence to:

**Administrator, Diploma in Education (Adult Education)**  
**Adult Education Research Centre**  
**5760 Toronto Road**  
**The University of British Columbia**  
**Vancouver, B.C.**  
**V6T 1L2**





## Briefs

**New Business Staff:** Jim Sator, Director of the Commerce and Business Administration department, announces the appointment of Ms. Leslie McArthur as Departmental Assistant and Ms. Holly Hughes as Departmental Clerk Typist. Holly's background includes significant work experience with the Amalgamated Construction Association of British Columbia and the B.C. Chamber of Commerce, two organizations with which the College has had a significant working relationship over the past 19 years. Leslie's experience includes BCIT and B.C. Biomedical Laboratories. She holds a B.A. from S.F.U. and a Certificate in Fashion Design from the "old" Douglas College. We welcome Leslie and Holly to the College.

**Video Tapes Required Immediately:** The Educational Video Distributors are looking for completed educational video tapes for students 6 to 21. Art to Zoology and any material from which students can learn. Canadian content in History, Geography, and Law preferred. Make your films work for you and for others. Contact Mr. Williams at 416-924-3923, or forward a copy of your tape to: Educational Video Distributors, 13 Charles Street West, Toronto, Ontario, M4Y 1R4.

**Registration For Employees:** The Registrar, Trish Angus, has noted that some individuals were registering family and friends during the first time slot on the first day of registration. This slot is reserved for employees who want to enroll in a course. She asks that this principal be respected so that the College can continue to offer this advantage to employees.

**Bookstore Closure:** The bookstore will be closed from Monday, December 26 through Tuesday, January 3 inclusive.

**Library Hours:** The end of semester hours will be as follows:

December 19 - 7:45 - 4:30; December 20 - 23 - 8:30 - 4:30; December 24 - January 2 - Library Closed; January 3 - 13 - 8:30 - 4:30; January 14 - Library Closed; January 16 - Regular Spring Semester Hours Begin; Monday - Thursday - 7:45 am. - 10:00 pm.; Friday - 7:45 am. - 4:30 pm.; Saturday - 9:00 am. - 5:00 pm.

**Work-Study Program:** The Student Placement Office would like to remind you that project submissions for Work-Study projects are being accepted from interested college personnel. They are looking for one-time (non-repeating) projects that will be in addition to the normal on-going activities of the department. The projects should provide students with opportunities to develop career-related skills. Work-Study application forms are available at the Student Placement Office, Room 2710. The deadline to submit Work-Study Project Applications is **Friday, December 23.**

**Faculty Development Yellow Pages:** If you haven't already filled in your response to the Faculty Development Yellow Pages, please do so by completing the form at the back of the Dec. 6 edition of Inside Douglas College and return the sheet to Eugene Hrushowy by December 30.

**UBC Course Cancelled:** The UBC Department of Administrative, Adult and Higher Education would like to inform faculty and staff that the course entitled Higher Education 513 - Issues In Higher Education - will not be offered during the 1989 winter session at UBC. This course will be offered in the 1990 winter session.

**Choirs:** Interested in joining the Douglas College Amabilis Singers or enrolling your children in the Douglas College Children's and Youth Choir. Call Community Programs and Services for a vocal interview. For more information about the Amabilis Singers, please call the choir's president Gill Bartholomew at 270-1961.



The TAC Bulletin provides information on educational technology which may be of interest to Grant MacEwan Community College (GMCC) personnel. This newsletter is distributed to all GMCC staff and to interested individuals throughout Canada.

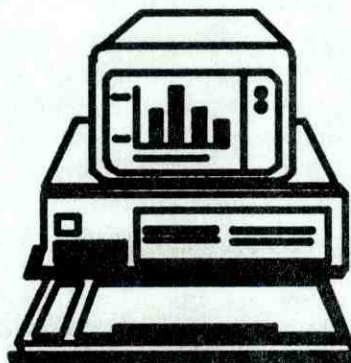
## Technology and Education: Seeking A Rational Middle Ground

by Robert N. Christie

I was struck with an unbelievable sense of déjà vu as I read Peter Furstenau's article "Using Computers for Instruction: Issues For Consideration" in the April 1988 edition of the TAC Bulletin.

The topic reminds me of a never-ending boxing match. In one corner are the technocrats. They argue that technology will be the panacea of education. In the other corner are the traditionalists. They argue that technology is useless, because it clearly cannot do all the technocrats say it can do.

I've watched it happen a number of times during my career in the Public School System, at the University of Alberta, and during my five years as an instructor, and then as program head of the Audiovisual Technician program at Grant MacEwan Community College. I, too, have participated in these fractious debates...sometimes on one side and sometimes on the other.



Of course, there is no single villain in the piece. Technocrats (and I count myself among them) are often a self-satisfied lot. They regularly receive significant budgets to purchase their shiny, new, and often, unproven toys. They see themselves as the messiahs of the industry who will drag the traditionalists kicking and screaming into the 21st century. Technocrats tend to focus on what the technology can do, rather than on what the technology should do.

On the other hand, I've seen many examples of situations where traditionalists underfund the technology, and then point to the failure of the project as proof that the concept doesn't work after all.

It is true that, throughout all of these furious battles, some significant changes have occurred. Even the most traditional instructor will occasionally use a chalkboard, almost certainly a textbook, and maybe even a slide, overhead transparency, film, or videotape. Instructors are able to give cogent, rational justifications for the use of these devices, despite the fact that these devices are also technological interventions in the pedagogical process.

As a public sector educator, I was disturbed both by the mindless rush toward technology and by the mindless resistance to these productivity tools. Then, in 1978, the cacophony stilled. I left the world of public education and

*continued on page 2*



## *Technology and Education: Seeking a Rational Middle Ground ...continued*

entered the private sector, where questions regarding the use of technology continued to be discussed and even debated; sometimes the technological alternatives were accepted and at other times rejected. But there were few, if any, arguments about what direction the technology was taking.

What is the difference between the private sector and the public sector as it relates to the implementation of technology and the transmission of information? I believe the answer can be found in three simple words: clarity of purpose.

First, consider public education. Is the purpose of public education to educate? It is to transmit information from one place to another? Is it to train young people to be able to cope with today's society?

I am unaware of a single educational institution that bases its budget on the number of bits of knowledge crammed into the number of heads involved. I am unaware of any realistic attempt to systematically analyze cost benefit based on an educational institution's teaching costs, classroom costs, laboratory

costs, and educational media costs. Rather, education seems to be evaluated, not on the basis of how much learning occurs, but on the basis of how many full-time (or part-time) instructors stand in front of how many bodies for how many hours, days, weeks, or months. In fact, the cynic might suggest that the true purpose of education is not education but self-perpetuation.

In the business sector, however, the main purpose is crystal clear. The ultimate objective is profit. Whether we like it or not, almost every business decision is based on profit.

The cost of training is almost always compared with the cost of leaving workers untrained. While this approach might seem hard to some, particularly when issues such as safety are involved, it has a significant benefit for the private sector educator. We have an opportunity to justify our recommendations and our training approaches against an absolute measuring stick: profit. In the private sector, the goals of training are almost always specific: to improve morale and reduce staff turnover by 3.5%; to reduce accidents by 8%, the injury rate by 4%, and the

fatality rate by 11%; to improve energy consumption; to decrease rejection rates; to reduce union grievances or labour-management conflicts; or to reduce theft, spillage, or abuse of equipment.

Of course, the budgets for these private sector training programs are also more in line with the anticipated benefits. If the training program is likely to save a company a million dollars, the expenditure of a quarter of a million dollars on training is considered good business. For example, the Chrysler Corporation recently decided to provide chemical handling training for each of its 85,000 employees. Chrysler realized that it would be economic suicide to pull employees off the assembly line in numbers sufficient to make classroom training cost effective. Thus, the company opted for individual study, computer-based training, using interactive video. The program, which takes an employee about an hour to complete, costs approximately twenty dollars per employee training hour, or just under \$1.7 million (U.S.) for the entire program.

*continued on page 3*

## Table of Contents

### Technology and Education:

Seeking a Rational Middle Ground .....	1
A Copyright Update .....	3
An Enhanced Learning Resources Centre in Mill Woods .....	4
The Revolution is at Your Fingertips .....	5
Computer Graphics and Desktop Publishing Courses at GMCC .....	5
An Introduction to the Videodisc: Part 1 .....	6
Supercomputing Explained .....	8

### Training for Improved Performance:

A Training and Support Program .....	9
Children and Computer Icons .....	10
To Improve Learning:	
Redesigning Alberta Correspondence Courses .....	11
Tech Trivia .....	12
Breaking the Unseen Barrier .....	15
Bits & Bytes .....	16
About the TAC Bulletin .....	20
TAC Calendar .....	21
CML Corner .....	22



### *Technology and Education: Seeking a Rational Middle Ground ...continued*

While I have not had million-dollar budgets, I have been involved with projects that expended \$150,000 to \$250,000 to develop two to three hours of training materials. These budgets do not even include the additional costs for space, salaries, supervision, manpower time, and the like.

It would be an interesting experiment for a faculty member, in any public educational institution, to approach his or her president or superintendent and suggest the expenditure of \$150,000 on the development of two or three hours worth of training materials, regardless of the number of students involved.

In the private sector, the use of technology is not always for the development of training at lower per hour costs. Sometimes, the goal is to develop training programs, which provide a high degree of training consistency, in various locations, and over extended periods of time, for legal or other reasons. Sometimes, the goal is to provide training in a highly confidential manner. Some-

times, the goal is to provide consistent and precise training in situations where even slight deviations can result in disasters. (The health sciences and the aviation industry are two such examples.)

Unquestionably, some disasters have been perpetrated in the name of profit, just as some disasters have been perpetrated in the name of education. Unrestrained technocracy can be a dangerous thing. The tools of technology are seductive. These bright, shiny toys with their flashing lights and digital displays are more than compelling. They also bring power to those who control them. But for the most part, such deviations and disasters can be controlled by answering two simple questions: What is the cost? What is the benefit?

The direction is clear; an increase in the use of technology in education is inevitable. On the one side, the promoters, hucksters, and salespeople will continue to overstate their cases,

and many administrators will continue to promote the use of shiny toys so that they have something to show visiting dignitaries. On the other side, those who fear the unknown will, unfortunately, continue to lash out blindly.

But technology will still come. The only question that remains is: How will that technology be used and controlled? Those who support public education must develop a clear and precise purpose. They must work toward the development of some type of measuring stick (like profit in the private sector) on which to base their educational decisions, including decisions relating to the use of technology. If that measuring stick can be found in public education, the result will be the rational middle ground in the use of technology that all of us seek.

Submitted by  
**Robert N. Christie**, President,  
Christie Communications,  
#210, 11738 Kingsway Avenue,  
Edmonton, Alberta (403)451-4260.

## A Copyright Update

A number of amendments to the Copyright Act, Bill C-60, have received Royal Assent. The amended Copyright Act will strictly protect the rights of creators. It also includes protection for choreographic works and computer programs, abolishes the compulsory license for second recordings of musical works, introduces the right of public exhibition of artistic works, and includes antipiracy provisions.

Amendments to the Copyright Act's "fair dealing" provisions, which will suggest exemptions for certain types of users, could be introduced as early as the fall of 1988.

Bill C-60 represents the first major revision to the 1924 Copyright Act. One of the bill's major thrusts is toward the formation of collectives that represent the interests of specific groups of

artists. The collectives will be permitted to approach the provincial governments to negotiate licenses for the use of the copyrighted works that fall within their jurisdictions. The collectives will then distribute the royalties to their members. The actual operating guidelines for these collectives have not yet been formalized.









# INNOVATION ABSTRACTS

PUBLISHED BY THE NATIONAL INSTITUTE FOR STAFF AND ORGANIZATIONAL DEVELOPMENT, THE UNIVERSITY OF TEXAS AT AUSTIN  
WITH SUPPORT FROM THE W. K. KELLOGG FOUNDATION AND THE SID W. RICHARDSON FOUNDATION

## What the Fox Needs to Know

The fox knows many things, but  
the hedgehog knows one big thing.  
Archilochus

### High Fashion

CBL (competency based learning) is back in town. Resplendent in color-coordinated garb, CBL is all order and system, exuding rules and structures and steps. CBL provides education's current high fashion look. Traditional role-model instruction, by contrast, is little more than rumpled corduroy. The appeal to our beleaguered colleges and institutes is obvious: CBL promises a stylish science of instruction to replace an outmoded art.

The CBL process starts with getting together a group of practitioners, what one authority calls the lunch bucket brigade. They spend a predetermined time (which sounds a lot like traditional instruction), usually two or three days, with a facilitator and break down the job into 100, or 150, or 287 specific tasks. These can range from "communicate with peers" to "assemble high pressure air hose." The result is the familiar DACUM (Develop a Curriculum) chart, which contains in detail everything which might appear on a job description except "other tasks as assigned." A little problem here, because these "other tasks" often constitute the major part of many jobs.

After each task has been identified, it is put into a competency format, which states a pre-specified level of performance which must be achieved under pre-specified conditions. Based on these statements, modules are developed—with pre-test, objectives, learning materials, learning activities, and post-test.

CBL is very imposing, so precise and tidy, so tangible and well-engineered. But does it work? Is CBL competent, or is it just the latest look?

### A Plan Too Perfect

Probably the primary defect of CBL is what its advocates believe to be its biggest strength: its mechanistic precision. The development process wrings out everything we can discover about a job and transforms these things, and only these, into competencies. Thus,

students learn what they need to learn and no more. Clean, clear, efficient.

The problem is that many jobs do not parse very easily. A few jobs, such as typist or elevator operator, can be divided into specific skills without difficulty. A group of journeymen hedgehogs, for example, could probably develop a DACUM which would be sufficient to prepare an apprentice for every conceivable hedgehogian task.

However, even occupations like caretaker contain many qualities that fall between the cracks on the DACUM. When the focus is entirely on tasks that appear on the chart, some of the most critical qualities may be inadvertently overlooked. Every rabbit knows that the fox, one of nature's prime entrepreneurs, is somehow more devious than his DACUM would suggest. The rabbit wishes it were otherwise.

In the analysis of what went wrong in the Three Mile Island nuclear accident in 1979, the Kemeny Commission concluded that human error on the part of the technicians caused the failure. The technicians responded by saying that they had not been trained for the situation which they had to confront. The Commission looked at the training program and discovered that the technicians had learned how to operate the reactor without any understanding of why things happened. They had been well trained to push the right buttons at the right time, but they were incapable of dealing with the unfamiliar.

[This kind of training brings to mind the explanation made by a car manufacturer when criticized about the quality of the brakes on his vehicles. The brakes, a spokesman responded, are adequate in all normal circumstances. This was hardly reassuring, as the times you need really good brakes are in abnormal circumstances.]

In the process of getting all the tasks for a nuclear technician written down on paper, the connections and the meaning and the why must have gotten lost. Indeed, it is probably impossible to write down all the subtleties of most jobs. It is well known that novices are better able to describe how they do their jobs than are the experts. Expertise is increasingly understood to be basically intuitive and not easily dredged up to the conscious level. Furthermore, while novices tend to approach the same task in the same way, each expert





tends to develop a unique strategy. This reality is currently bedeviling to those who think they can build a thinking, or fifth generation, computer.

Thus, if you are able to predict—with a high degree of confidence—everything that workers will confront on the job and you are able to put this down on paper, CBL may work. However, if there are many "other tasks" or if you expect the program to go beyond training at the novice level, you may get a program meltdown.

### The Utility of Wastefulness

Consequently, the biggest problem with CBL is that it assumes the world is very tidy and measurable. On the other hand, the major strength of traditional instruction is that it recognizes that the world is imprecise, contradictory, and full of surprises. There surely can be no doubt that a 50-minute class in role model instruction is really about 10 minutes of burger and 40 minutes of lettuce, tomato, cheese, and bun. But it is these other ingredients which transform a piece of broiled ground beef into a hamburger. The extras, therefore, only seem like extras because without them the flavor, the texture, the glory of "hamburgerness" is lost.

It is this apparent wastefulness which is the strength of role model instruction. The anecdotes, the personal experiences, the excursions into what might seem at the time to be irrelevant territory—all of this supposed wastefulness, expunged from engineered education, is actually the richness of human experience.

### The Fox Starts Out

Study after study, literally for decades, has concluded that there is no one best method of instruction. However, at the same time, some methods work better for certain students than for others; some work better in some subjects than in others; and some work better in some circumstances than in others. But no one method is best for all students, in all subjects, in all circumstances.

CBL should be seen as one of the many options in the instructor's toolbox—for example, lecturing, shop projects, seminars and workshops, field training, essays, oral presentations, product development, role-playing, computer-assisted instruction, simulation, and audio-tutorial. And a variety of tools equips the workman to appreciate the diversity and complexity and subtlety of the human experience. As Abraham Maslow once observed: To him who has only a hammer, the whole world looks like a nail.

Like other systems, CBL is effective in certain

circumstances, but it is no panacea. It will work better with more mature and experienced students, for example, than it will with those just out of high school. It will work better with students who have good reading skills than it will with those who are barely literate. It will work better with topics where there is one right answer than it will in those areas where solutions depend on context. And it will work better when enough time (at least 10 hours of development to one of instruction, according to authorities) and money are available than if only lip service support is provided.

CBL is highly effective with some students learning some circumstances. CBL is a useful instructional tool for training a hedgehog. The fox will need more.

John S. Scharf, *Educational Consultant*

For further information, contact the author at 125 5th Avenue, #1108, Saskatoon, Saskatchewan S7K 6A5, CANADA.

Suanne D. Roueche, *Editor*

November 18, 1988, Vol. X, No. 28

© The University of Texas at Austin, 1988  
Further duplication is permitted by MEMBER institutions for their own personnel.

INNOVATION ABSTRACTS is a publication of the National Institute for Staff and Organizational Development (NISOD), EDB 348, The University of Texas at Austin, Austin, Texas 78712, (512) 471-7545. Subscriptions are available to nonconsortium members for \$35 per year. Funding in part by the W. K. Kellogg Foundation and the Sid W. Richardson Foundation. Issued weekly when classes are in session during fall and spring terms and once during the summer. ISSN 0199-106X.